

RIVER STAGES AND FLOODS

By BENNETT SWENSON

THE principal features of the month were the continuation and increase of drought conditions over most of the country east of the Mississippi River, especially in the central Gulf States, the Ohio Valley and the Middle Atlantic States, and continued above-normal precipitation in Iowa and Minnesota and most of the Missouri and Arkansas Valleys.

River stages were unusually low over most of the East, the South, and the far Northwest except that light flooding occurred in the eastern Carolinas. In the Missouri and Upper Mississippi Valleys stages were well above normal but damaging flood conditions were generally avoided due to the distribution of the rainfall, except in some local areas where excessive concentrations resulted in destructive floods.

Hudson Bay drainage.—The Red River of the North rose to 18.7 feet on July 10 at Moorhead, Minn., 1.7 feet above flood stage. The rise resulted from heavy thunder-showers in the upper basin. Wahpeton, N. Dak., reported 4 inches on July 3 and similar amounts were reported from Fergus Falls, Minn., and White Rock, S. Dak. Two days later, showery conditions again occurred with amounts somewhat above 1 inch. Only slight damage resulted from this rise which followed a 20-foot crest during the previous month.

Atlantic Slope Drainage.—River stages were generally low throughout the month except in the streams in the Carolinas. Flooding occurred only in the Cape Fear River with light overflows recorded at Fayetteville and Elizabethtown, N. C., on July 17–20. Excessive showers occurred over the Cape Fear, Neuse, and upper Tar Rivers on July 14; however, the soil had been extremely dry and resulting run-off was low.

Upper Mississippi Basin.—Stream flow was considerably above normal in the basin and flood stages continued from the previous month along the Mississippi River from Gordons Ferry, Iowa, to Grafton, Ill., during the first part of July. Thereafter a general recession of water levels took place.

Missouri Basin.—Unusually intense local rains resulted in damaging overflows in Perry Creek at Sioux City, Iowa, and Sappa and Prairie Dog Creeks, in the upper Republican River Basin. Otherwise, light floods occurred in the Big Sioux and Floyd Rivers in Iowa, and the Solomon, Blue, and Republican Rivers in Kansas and Nebraska. Stages in the Missouri River between Blair, Nebr., and Waverly, Mo., receded from flooding which was in progress during June.

On the night of July 6–7, excessively heavy rains occurred over the lower Floyd River and the Perry Creek watersheds. The Perry Creek overflow caused the greatest damage, confined entirely within the city limits of Sioux City, Iowa. A large section of the city comprising 1,000 acres was flooded and 1,133 residences and 350 business properties were affected. The heaviest rain was concentrated over a very small area as is seen from the following amounts of recorded precipitation: City Airport, 1.18 inches; North Sioux City, 4.80 inches;

James, Iowa (5 miles northeast of Sioux City), 6.98 inches; and Merrill, Iowa (12 miles north of James), 1.82 inches. Flood waters of the Floyd River surrounded James and caused some damage in the northeast part of Sioux City.

On July 16, more than 5 inches of rain at Oberlin, Kans., caused Sappa and Prairie Dog Creeks to overflow seriously. Sappa Creek reached a record stage of 18.7 on the gage near Beaver City, Nebr., 7.7 feet above bankful.

Arkansas Basin.—Flooding, mostly light, was confined to the Little Arkansas River at Sedgwick, Kans., and the North Canadian River at Yukon, Okla. The overflow in the Little Arkansas resulted from heavy rains of 2 to 3 inches on July 9, followed by rainfall of nearly 3 inches on July 11. A crest of 23.6 feet was reached at Sedgwick on the 11th.

The North Canadian River rose to 11.2 feet, 0.2 foot above flood stage, on July 29 at Yukon, Okla.

FLOOD-STAGE REPORT FOR JULY 1944

[All dates in July unless otherwise specified]

River and station	Flood stage	Above flood stages— dates		Crest ¹	
		From—	To—	Stage	Date
HUDSON BAY DRAINAGE					
Red of North: Moorhead, Minn.	<i>Feet</i> 17	7	13	<i>Feet</i> 18.7	10
ATLANTIC SLOPE DRAINAGE					
Cape Fear:					
Fayetteville, N. C.	35	17	17	35.0	17
Elizabethtown, N. C.	20	17	20	27.3	18
MISSISSIPPI SYSTEM					
<i>Upper Mississippi Basin</i>					
Mississippi:					
Burlington, Iowa.	15	June 21	4	16.6	June 30
Keokuk, Iowa.	12	June 10	7	17.25	June 22
Gregory Landing, Mo.	12	June 10	8	16.8	June 23
Quincy, Ill.	14	June 9	9	19.2	June 23
Hannibal, Mo.	13	Apr. 21	13	19.6	Apr. 25
				22.5	May 28
				19.2	June 24
				19.2	Apr. 26
				13.2	May 6, 10
Louisiana, Mo.	12	Apr. 21	14	19.8	May 28
				13.6	June 12
				17.0	June 24–25
Grafton, Ill.	18	June 24	5	19.1	June 27–28
<i>Missouri Basin</i>					
Big Sioux: Akron, Iowa.	12	11	15	16.5	15
	14	6	6	16.6	6
		11	15	17.2	12
Floyd: James, Iowa.		2	2	19.4	2
Solomon: Beloit, Kans.	18	7	7	19.6	7
		26	27	20.6	27
Big Blue:					
Beatrice, Nebr.	16	24	24	16.85	24
Barnston, Nebr.	18	24	24	20.4	24
Republican: Guide Rock, Nebr.	9	24	24	10.2	24
Grand: Brunswick, Mo.	12	June 10	14	14.4	June 15
				15.5	June 21
Missouri:					
Blair, Nebr.	18	June 13	5	19.6	June 17
Nebraska City, Nebr.	15	June 12	15	19.7	June 15
St. Joseph, Mo.	17	June 14	7	19.1	June 18–19
Waverly, Mo.	18	June 13	5	20.9	June 20
				19.3	4
<i>Arkansas Basin</i>					
Little Arkansas: Sedgwick, Kans.	18	11	12	23.6	11
North Canadian: Yukon, Okla.	11	29	29	11.2	29

¹ Provisional.